DOCUMENT RESUME

ED 060 957 PS 005 495

AUTHOR Nieman, Ronald H.
TITLE Early Childhood Education Project Evaluation, 1970-71. ESEA Title I.
INSTITUTION Cincinnati Public Schools, Ohio.
PUB DATE 71
NOTE 17p.

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS Communication Skills; *Comparative Analysis; Concept Formation; *Early Childhood Education; Inservice Teacher Education; *Kindergarten; Parent Participation; *Preschool Programs; Program Evaluation; Reading Readiness; *Test Results
IDENTIFIERS Boehm Test of Basic Concepts; ESEA Title 1 Projects; Metropolitan Reading Readiness Test

ABSTRACT

Results of an evaluation of the Early Childhood Project for the 1970-71 year are presented. The program continued to focus upon communication skill development and parent involvement. Inservice training for teachers and aides was continuous throughout the year. To determine if more organized, purposeful early childhood experiences would enable the child to attain a higher score on standardized tests, in November 1970 the Boehm Test of Basic Concepts was administered to 363 All Day Kindergarten with Pre-School students, 49 All Day Kindergarten without Pre-School students, and 141 Half-Day Kindergarten students. The Metropolitan Reading Readiness Test was administered in April 1971 to a random sample of six All Day Kindergarten classes and six comparable Half-Day Kindergarten classes. A total of 806 kindergarten students, only 509 of whom had pre-school, were administered the Boehm in September 1971. Comparisons were made between pre-school and non-pre-school children months after the end of the pre-school treatment. The results showed the pre-school group scored significantly higher than the non-pre-schoolers at the .01 level. Results of the Metropolitan Reading Readiness Test show All Day Kindergarten students to have nearly double the mean of the Half-Day Kindergarten students. (DB)

ED 060957

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

ESEA TITLE I
EARLY CHILDHOOD EDUCATION
Project Evaluation
1970-71

Introduction

Rationale. A consistent pattern of failure brought about by language and reading deficiencies in early childhood, lack of personal experiences, and low motivation have been shown to have a direct negative influence on the educational aspirations of older children. It follows, then, that if we are to pursue a path of preventative rather than crisis remediation, the earlier in a child's life we begin to enrich his educational program, (with a plan for continuous input) the higher the rate of return we can expect from the educational program.

Experiences, in Cincinnati, as in other urban communities throughout the nation, have indicated that there is a need for concentrated efforts to provide an enriched environment, to improve language, to strengthen perceptual and auditory skills, and to develop the potential of the family as a unit in motivating the learning of children from disadvantaged areas.

Background. This project was based primarily upon the recommendations of the Program Development Committee on Early Childhood Education as well as the findings from the Head Start summer and year-round programs funded under OEO and HEW. In addition, research on the characteristics and learning styles of children from educationally deprived environments served to strengthen the proposed rationale.

Priority was given to children from low-income families and those families with apparent low achievement, since actual educational test data indicating educational deprivation is not feasible for this age group. Environmental and economic background and present living conditions of these families indicate a need for early intervention in the child's learning.

PS 005495

The project involves fourteen schools, thirty-five classes and approximately 1250 pupils. The classes were in eligible E.S.E.A. Title I schools. All classes for pre-kindergarten children are one-half day in length, generally two sessions in each school. Enrollment in these classes is limited to 15-20 children per class.

Sixteen of the twenty-one kindergarten classes received an all-day experience rather than the traditional one-half day session. Enrollment in these classes was limited to 20-25 children per class.

The project recognizes that young children residing in disadvantaged areas have multiple needs. Services were concentrated on these selected pupils to provide for nutritional, medical, dental, psychological and educational needs.

The Health Project funded under state funds was coordinated with the early childhood education project to provide for the health needs of these pupils upon request.

A representative of the Community Action Commission and the Archdiocese of Cincinnati met with the project developer to review the intent of the project. All boys and girls in the eligible E.S.E.A. Title I schools, regardless of their intention to attend public or parocial sxhool were eligible for the program. Children residing in institutions for neglected or delinquent children were serviced through another component. No Pre-School classes are provided with state or local funds in non-elibible buildings. An additional 32 classes were provided through HEW funds. These classes were located in other Title I eligible buildings not selected for concentration of Title I funds during the 1970-71 school year.

General Objectives

The major component of the Early Childhood Education Project reflects in its major objectives, the two-fold purpose of the project which is:

1. To provide a program to motivate the four, five or six-year-old

child; to emphasize communication skills: to strengthen percentual auditory skills; and to develop social learnings.

2. To help parents establish an immediate and future home environment conducive to the development of the potential of the family unit.

The purposes are refined to indicate the more specific objectives described below:

Pupil Objectives

1. Development of cognitive skills
2. Increase language facility and listening skills
3. Development of desirable social skills
4. Development of good physical and mental health
5. Development of more satisfying self-concept

Parent Objectives

1. To increase the understanding and expertise of parents of project children so that they can provide an educational environment within the family unit.
2. To relate classroom and school experiences to out-of-school learning.
3. To involve parents in reinforcing and extending school learnings in the home situation.
4. To provide background information and related experiences for parents through discussion meetings, literature, and volunteer participation in the classroom.

Project Services

Process. Those readers who are interested in a highly detailed processs report, should refer to Appendix A of Volume 6, Number 1, February 1971, Journal of Program Research and Development.

Class Organization. Pre-Kindergarten classes consisted of fifteen to twenty children. Children attended classes five days a week for 2½ - 3 hours per day except when in-service meetings were scheduled. Morning sessions

operated from 8:45 to 11:30; afternoon sessions from 12:45 to 3:30.

Each pre-kindergarten class was staffed with a full-time instructor and an instructor assistant. Other supportive services included a psychologist, psychiatrist, social worker and parent education leader. Volunteers were also used in the project.

All-day kindergarten classes consisted of 25-30 children. Children attended classes five days a week for a total of 25 hours per week except once a month a half-day was set aside for staff planning and conferences. Children attended classes 23 hours during those weeks. Generally half-day kindergarten morning sessions operated from 9:00 to 11:45; afternoon sessions from 12:45 to 3:30. In those schools where all-day kindergarten classes were scheduled, the morning sessions were funded under local funds, but extended in the afternoon under ESEA, Title I.

Each kindergarten class was staffed with a full-time teacher and a teacher aide. Teachers were funded half-time by the Board of Education and half-time under Title I to accommodate the full-day program. The aide was funded full-time under Title I. In addition, a media resource teacher, locally funded, worked with these children on a scheduled basis to provide educational and enrichment experiences in the Resource Center. Other supportive services were provided under the regular school program.

The General Program

The program was concerned with providing a classroom environment for four, five and six-year-olds to develop the necessary skills, attitudes, and habits for experiencing success in the regular school program.

Language and concept development form the core of the curriculum. Through emphasis on use of names - people, materials, equipment - rather than pointing, and the use of words to communicate feelings, the pre-kindergarten children begin to relate words to people and things. Vocabulary develops and increases as class experiences and trips are recorded and referred to; stories and

poems are read or told; picture books are discussed and enjoyed; and dramatic play takes place. Through language development, activities such as songs, finger plays, discussions, and stories, concepts of size, shape, color, and space begin to form.

Perceptual skills are sharpened through the use of manipulative materials, such as building blocks, art materials, puzzles, and games. Songs and physical education activities afford pleasure at the same time increasing language skills, listening skills, auditory discrimination, and motor development.

Concern was given to a wide variety of travel experiences for children to enrich the program. Walks of a short distance to explore the immediate neighborhood surroundings or bus trips into the larger community were scheduled on a regular basis in most classes.

These educational experiences initiated in pre-school were continued, followed up and expanded in the kindergarten classes at a level commensurate with the maturity of the children. Many of these children will become enrollees in Component B and be maintained in that project through Grade 2 or as long as they exhibit a need for project services.

<u>The Parent Program</u>

Training parents to assist in:

a. developing perceptual and auditory skills of the young child through planned activities such as nursery rhymes, stories, jingles, finger plays.

b. developing desirable speech model for the young child, just acquiring speech.

c. developing parental talents in providing young children with an environment conducive to learning.

d. helping parents to understand characteristics and needs of their young.

PS 005495

The parent program was directly related to the classroom experiences and expectations of the child. Parents were involved at times as learners when they engaged in in-service activities and/or as leaders when they volunteered to participate in the classes or conducted small discussion groups.

This project continued the existing pre-kindergarten program funded under ESEA and HEW and extended the program to include more intensive concentration on language and speech and on developing the potential of the family unit as a motivator for learning.

In-Service Training. In-service training was continuous throughout the year for both teachers and aides in order to insure professional growth and increasingly effective performance. Major components of the in-service program included:

A. Pre-Kindergarten

1. An orientation during the beginning of the program for all personnel new to the Cincinnati Public Schools' pre-kindergarten program. The orientation included workshops, discussions, and meetings conducted by staff and qualified consultants as necessary. The emphasis was on giving as much practical assistance and information as possible.

2. Regular bi-monthly meetings of teachers and aides with administrative and supervisory staff and consultants were held as required to plan for and evaluate the on-going program.

3. Weekly schedules were required by the supervisor to outline the weekly plans for each session.

4. Rotating opportunities were afforded to the staff to attend regional, area, or national pre-school training conferences.

5. Visitations wer made to other pre-kindergarten centers for observations as requested.

6. Individual or group consultation with the project coordinator or supervisor of the program was scheduled as requested or required.

B. All Day Kindergarten

1. The sixteen all-day kindergarten teachers and aides held monthly planning and evaluation sessions with administrative and supervisory staff and consultants as needed.

3. A steering committee comprised of administrative and supervisory staff, teachers, and aides planned and directed other in-service activities needed to strengthen the ongoing program.

Student Description

The children in the pre-kindergarten classes were four years of age and those in the kindergarten classes were five on or before September 30, 1969, thus meeting the age requirement for admission to kindergarten and/or first grade in the Cincinnati Public Schools in September, 1970, as required by the State of Ohio. Pupils' applications for admission to the program were carefully screened with consideration being given to:

1. The needs of children as ascertained from sibling records;
2. Limited or low family income;
3. Child's physical condition - no physically handicapped child requiring special attention could be admitted;
4. Known low achievement level within the family.

Personnel

Listed below are the job titles, number of persons employed under that title, and the number of days of service.

-- Project Coordinator (.5) 215 days

-- Associate Supervisor (,5) 215 days

-- Instructor (19.5) 195 days

-- Instructor-Assistant (19.5) 195 days

-- Parent Leader (2) 195 days

-- Visiting Teacher and/or Social Worker (2) 195 days

-- Psychologist (variable) approximately 300 hours

-- Secretary (1) 215 days

-- Social Worker Aide (1) 195 days

-- Teacher, All-Day Kindergarten (16 @ .5 time) 195 days

-- Kindergarten Aide (20) 195 days (16 @ 1.00 time) 97 days

-- Primary Supervisor (1) 215 days

The deployment of personnel, student enrollment, and locations of the classes are outlined in Tables 1, 2, and 3. The enrollment figures represent June, 1970 data.

Table 1. Pre-Kindergarten

SCHOOL	Number Classes	Number Children	Number Instructors	Number Assistants
Garfield	2	25	1	1
Hays	4	60	2	2
Heberle	4	54	2	2
Millvale	4	59	2	2
Peaslee	2	31	1	1
Rothenberg	2	30	1	1
Sands	4	41	2	2
Sixth District	1	15	.5	.5
Taft Elementary	6	83	3	3
Vine	2	30	1	1
Washburn	4	60	2	2
Webster	2	29	1	1
Windsor	2	30	1	1
TOTAL	39	547	19.5	19.5

NOTE: The following personnel were assigned to all schools for centralized supportive services: 2 social workers, 1 social worker aide, 2 parent leaders, and 1 secretary

Table 2. All-Day Kindergarten.

SCHOOL	Number Classes	Number Children	Number Teachers	Number Aides
Garfield	2	60	2	2
Hays	2	57	2	2
Heberle	1	26	1	1
Millvale	2	60	2	2
Peaslee	1	24	1	1
Rothenberg	1	21	1	1
Sands	1	26	1	1
Taft Elementary	2	50	2	2
Vine	1	26	1	1
Washburn	1	26	1	1
Washington Park	1	25	1	1
Windsor	1	21	1	1
TOTAL	16	442	16	16

Table 3. Half Day Kindergarten With Teacher Aide

School	Number Classes	Number Children	Number Aides
Sixth District	1	30	1
South Avondale	1	60	1
Washburn	1	60	1
Webster	1	60	1
TOTAL	4	210	4

Budget

The total budget allotment for the project was slightly more than $600,000 Of this amount, $400,000 was spent on salaries; nearly $100,000 for the nutritional program (lunch and snacks); and slightly more than $73,000 for fixed charges (retirement, hospital insurance, etc.) and classroom rental. The total per pupil cost. For each group is shown in Table 4, below.

Table 4. Per Pupil Costs for Title I Early Childhood Education Project, 1970-71.

Component	Budgeted Amount	Number of Participants	Cost Per Child
Pre Kindergarten	$391,315	547	$715
All Day Kindergarten	200,000	442	553
Supportive Service To Half Day Kindergarten	12,000	210	56
TOTAL	$600,000	1,199	$540

EVALUATION

Background

In planning for the 1970-71 Early Childhood Title I activities, the PDC felt that comparisons should be made among All Day Kindergarten (ADK) with Pre-School (PS), ADK without PS, and Half-day Kindergarten (½DK). The Boehm Test of Basic Concepts was selected as the criterion measure, along with what data could be gathered from the Metropolitan Reading Readiness Test and the Pre-Kindergarten Goal Card. Some difficulty in obtaining comparable ½DK scores was encountered when ½DK was reduced in January to ½DK as the Board of Education was forced to eliminate some $4 million dollars from its budget.

The initial thinking (which was supported by available data) of the Early Childhood PDC in the spring of 1970 was that the more organized, purposeful early

childhood experiences a child had, the higher he would score on standardized tests. Credit for this phenomenon would be attributed to increased learning skills, abilities, achievement, etc. The general hypothesis was that ADK + PS > ADK w/o PS > ½DK.

Procedures

In November of 1970, the Boehm Test was administered to 363 ADK + PS students, 49 ADK w/o PS students, and 141 ½DK students. The Metropolitan Reading Readiness Test was administered in April 1971. A random sample of six ADK classes - Hays (2), Millvale, Peaslee, Vine, Washington Park and six comparable ½DK classes - Peaslee (2), South Avondale (2), Washburn (2). A total of 806 kindergarten students, only 509 of whom had pre-school, were administered the Boehm in September 1971. Comparisons were made between pre-school and non-pre-school children from months after the end of the pre-school treatment.

Results - Pre-School

The Boehm Test of Basic Concepts, Form A, was administered to a total of 806 Title I eligible kindergarten children during the first six weeks of school in September and October of 1971.

A one-way analysis of variance was performed comparing the 509 children with four or more months of pre-school experience against the 297 children who did not have pre-school. The results show the pre-school group to be significantly higher than the non-pre-schoolers at the .01 level. This is even more impressive when viewed in light of the fact that the criterion measurement was administered four months after the close of pre-school classes. Results are summarized below:

	Pre-School	Non Pre-School
$\bar{X}$ =	23.8	21.0
N =	509	297
SD=	7.0	9.8

ANOVA SUMMARY

	df	SS	MS	F	P
Between	1	1,474.8	1474.8	22.0	.01
Within	804	53,809.1	66.9		
TOTAL	805	55,283.9			

Of the two independent studies of pre-school effect, this one (September 1971) must be considered the more valid. The obvious reasons are:

1. Better sample size
2. Better sample distribution (most of the 49 ADK w/o pre-school students came from one school.)
3. Better test administration

Results - All Day Kindergarten

A. Boehm Test of Basic Concepts, November 1970

Appropriate caution must be used in the interpretation of pre-school effect in this (November, 1970) study because of the relatively small sample size reflected in the (ADK w/o PS) group.

The results are summarized in Table 5 below. The reader will note that there is virtually no differences between the overall results of ADK + PS and ADK w/o PS, nor is there any difference between ½DK + PS and ½DK w/o PS. There is, however, significant differences between both overall results and rational factor results when comparing both ADK groups (pooled) and the ½DK groups.

To express it differently, the data suggest that the effects of pre-school are not noticeable in ADK or ½DK students after approximately 10 weeks of school. On the other hand, ADK appears to be significantly higher than ½DK.

Table 5. Comparison of Kindergarten Treatment Groups on Boehm Test of Basic Concepts, November 1970.

A. All Day Kindergarten + Pre-School (n=363) vs. All Day Kindergarten without Pre-School (n=49)

SUBTEST	MEAN		S.D.		F RATIO	P
	ADK+PS	ADK w/o PS	ADK+PS	ADK w/o PS		
Space	14.4	14.4	4.4	5.2	0.006	ns.
Quantity	9.1	9.7	2.7	6.9	0.903	ns.
Time	1.9	2.4	1.1	1.5	7.810	<.01
Misc.	2.3	2.4	1.4	1.4	0.170	ns.

B. Half-Day Kindergarten + Pre-School (n=84) vs. Half-Day Kindergarten without Pre-School (n=57)

SUBTEST	MEAN		S.D.		F RATIO	P
	½DK+PS	½DK w/o PS	½DK+PS	½DK w/o PS		
Space	11.7	12.6	4.6	5.1	1.075	ns.
Quantity	7.7	8.2	3.1	3.2	0.998	ns.
Time	1.6	1.7	1.2	1.3	0.175	ns.
Misc.	1.7	1.7	1.3	1.4	0.000	ns.

C. All Day Kindergarten (n=412) vs. Half Day Kindergarten (n=141)

SUBTEST	MEAN		S.D.		F RATIO	P
	ADK	½DK	ADK	½DK		
Space	14.4	12.0	4.5	4.8	27.309	<.001
Quantity	9.2	7.9	3.5	3.1	13.994	<.001
Time	2.0	1.6	1.2	1.2	10.540	<.01
Misc.	2.3	1.7	1.4	1.3	14.373	<.001

It should be noted, further, that all differences in Table 5, A. and B., are in favor of the groups without pre-school experience.

B. Metropolitan Reading Readiness, April, 1971

Results were compared using the total score of subtests 1, 3, 4, and 5 of the Metropolitan Reading Readiness Test which was administered during the last week in March and first week in April. The results, summarized below, show ADK

to have nearly double the mean of the ½DK. The ANOVA summary shows a very high level of statistical significance. These findings replicate what was found in a similar study in May of 1970. (See Volume 6, Number 1 Journal of Program Research and Development.

Table 6. Mean Comparison of Sample ADK vs. ½DK, April 1971.

	ADK	½DK
N	= 159	147
$\bar{X}$	= 41.9	23.3
sd	= 12.7	11.8

ANOVA SUMMARY

	SS	df	MS	F	P
Between	45,854	1	45,854	532	.0001
Within	26,183	304	86.1		
TOTAL	72,037	305			

Interpretation of Zero Pre-School Effect, November, 1970 Study

Some rational and logical explanations for the apparent lack of impact of the 1969-70 pre-school program upon kindergarten performance should be made. The most obvious is that a child growing up in Cincinnati today has an excellent opportunity of being involved in meaningful and effective early childhood education programs, whether he attends Cincinnati Public Schools pre-school classes or not.

Let us examine this more carefully; a few ideas are listed below for the reader's consideration:

1. There is an extremely favorable climate of opinion for all early childhood programs throughout the country. A few illustrations are:
   a. Network television programs, i.e., Mr. Rogers and Sesame Street, are shown daily from coast to coast.
   b. An ever expanding library of high quality books is available for children.
   c. A virtually unlimited library of books and pamphlets for parents

which are directed toward understanding young children is available.

d. Newspapers and periodicals rountinely print generally favorable articles and features about early childhood education.

e. Private nursery schools, day care centers, Montessori groups, etc. are available in nearly every neighborhood.

f. The favorable climate of opinion is apparently self-reinforcing, i.e., a favorable opinion often results in deeper involvement which leads to increased understanding, resulting in deep appreciation and an even more favorable opinion. Thus, principals, teachers, parents, and community leaders are becoming increasingly active in early childhood educational programs.

2. Older siblings who have previously participated in Head Start and ADK may have a positive spin-off effect on their younger brothers and sisters.

3. Extreme differences in the numbers of students in the ADK and ½DK cells reflect a poor sample. The fact that nearly all ADK students were selected from the ranks of former pre-school students made a better sample impossible.

4. The ADK curriculum may not be organized so as to take full advantage of the skills acquired by most students in the pre-school program. Concentrated effort is being focused upon this area so as to maximize gains made during pre-school.

Limitations of the Boehm Test - Some Criticisms and Answers

1. Since the data gathered from the Boehm are dichotomous, i.e., "right or wrong," no factor analysis is possible. This is a common shortcoming of nearly all standardized tests. (A point biserial correlation was performed, however, by the author.) The factors are rational rather

than the product of a varimax rotation or similar procedure.

2. No validity coefficient is included in the manual. The test must, therefore, be accepted on "face" or on content validity. We correlated the results of the Metropolitan Reading Readiness Test with the Boehm (N=50 pairs) in order to establish our own concurrent validity coefficient. Using the Pearson Product Moment formula we obtained a correlation of .74. Further, it is safe to say that the test does have high content validity.
3. No claim is made that the norms represent a perfect cross-section of "all America." They were, howecer, standardized on a total of 12,406 children from 21 different cities coast to coast (including 281 from Cincinnati). It is interesting to note that our mean for ½DK without Pre School is 24.2; the 50%ile reported in the test manual for low SES kindergarten students is 25.

Attendance

The interest and attitude of both parent and child may be best reflected by their willingness to remain in a project and put forth the necessary effort to keep active. Viewing attendance as something of a barometer of interest, ADK parents and children seem to be doing well. Of the 424 students enrolled, in ADK class in September, 398 (or 94%) remained in the same classes as of May. This compares very favorably with the average turnover rate of for all Title I elementary classes.

Average daily attendance for ADK was up 0.1% over 1969-70 to 89% for school year 1970-71.

Pre-school attendance was nearly 5% under 1969-70 of 87.7%, however, the probable explanation for this decrease is that some parents were reluctant to send their four-year-olds to pre-school when their five-year-olds

could not attend kindergarten because of the "cutbacks" in regular kindergarten.

Recommendations

1. Continue efforts in ADK program, and expand when possible.
2. Continue to incorporate more ADK w/o PS classes in the evaluation design so that we may have more confidence in the evaluations.
3. Plans for early childhood non-graded (PS and ADK) classes should be considered.

RONALD H. NIEMAN
Division of Program Research and Design
Cincinnati Public Schools
230 East Ninth Street
Cincinnati, OH 45202

DEC 14 '71